

Claims

1. A LED, comprising:

At least one LED chip mounted on a base of high heat conductivity, the LED chip is electrically connected to an applied power supply through a circuit board and has transparent medium layer on it, and the base top surface acts as a light reflective surface or a light reflective surface is provided around the base, wherein, circuit boards are provided on or around the base.

2. The LED according to claim 1, wherein, at least one screw or screw hole is provided on or in the base bottom to mechanically connect the base to a heat sink.

3. The LED according to claim 1, further comprising a light reflector at front of the LED chip.

4. The LED according to claim 1, wherein, the transparent medium is optical glue and a lens.

5. The LED according to claim 1, wherein, the LED chips are a plurality of LED chips emitting the same color light or different color light, the chips are connected to each other in a serial or/and parallel form.

6. The LED according to claim 1, wherein, the base is a metal base, an ultra-high heat conductivity tube or an assembly of a metal base and ultra-high heat conductivity tube under the metal base.

7. The LED according to claim 3, wherein, the angle between the light reflecting surface and the LED axis is an angle from 10° to 70° .

8. The LED according to claim 4, further comprising light converting material in the optical glue or between the optical glue and the lens.

9. A LED lamp consisted of the LEDs of claim 1, comprising:

At least one LED, mechanically connected to the heat sink through screws or screw holes on or in the base bottom of the LED;

A driving circuit, to which outgoing leads of the LEDs are connected; and

Transparent bulb housing mounted over the LED.

10. The LED lamp according to claim 9, wherein, the electrical connector is a double-leg bayonet lamp head, multi-leg bayonet lamp head or a screw lamp head.

11. The LED lamp according to claim 9, wherein, the transparent housing is a transparent, colored or scattering bulb housing made of glass or plastic.

12. The LED lamp according to claim 9, wherein, a light converting material layer is coated on the inner surface of the bulb housing.

13. The LED lamp according to claim 9, wherein, the heat sink has heat dispersing flanges on it.

14. The LED lamp of claim 13, wherein, the heat sink has a single heat dispersing gyroidal flange or a plurality of gyroidal heat dispersing flanges.

15. The LED lamp according to claim 13, wherein, the inner surface of the heat sink is a light reflection surface.

16. The LED lamp according to claim 15, wherein, the inner surface is cylindrocircular or parabolic.

17. A LED traffic lamp, wherein, at least one LED is mounted on the heat sink near the focus of the parabolic light reflector of a traffic lamp, the divergence angle of the LED is an angle in a range between 3° and 60° , the light emitted by some of the LEDs is emitted outside through the transparent window of the traffic lamp, the remaining light is emitted outside after reflection from the parabolic reflector of the traffic lamp to obtain a desired focus.

18. A LED plane light source, wherein, at least one LED is mounted on a heat sink having a flat heat dispersing plate, the radiator sink is located on the back side of and around the light guiding plate of a back illumination light source for a plane light source or liquid crystal display, light reflectors are disposed on the two sides of or around the LED.

19. The LED plane light source according to claim 18, wherein, the LEDs emit the same color light or different color light.